August 2009

[KV 740]   **Sub. Code: 4231**

SECOND B.PHARM. DEGREE EXAMINATION

(Regulation 2004)

Candidates Admitted from 2004-05

Paper II – PHARM ANALYSIS AND PHYSICAL CHEMISTRY

Q.P. Code : 564231

Time : Three hours   **Maximum : 90 marks**

Answer Part I and Part II Separately

PART – I

(PHARMACEUTICAL ANALYSIS)

I. Essay Questions :   Answer any ONE question   (1 x 20 = 20)

1. **a)** Write note on the Gaussian distribution (Normal distribution curve).
   b) Describe in detail about **i)** Henderson-Hasselbalch **ii)** Volhard's
    method
2. **a)** Define buffer. What are the applications of buffer solution in
     pharmacy?
   b) Masking and demasking agents in complexometric titrations.

II. Write Short Notes :   Answer any FOUR questions   (4 x 5 = 20)

1. Define Gasometry. Give the procedure for the assay of oxygen.
2. Theories of indicators in Neutralization titrations.
3. Explain the preparation and standardization of acetous perchloric acid
   including the precautions to be taken.
4. Write the importance of quality control of drugs.
5. Give note on factors affecting solubility of precipitates.

III. Short Answers: Answer any TWO questions   (2 x 2.5 = 5)

1. pH of the solution.
2. Define Acid value and Saponification value.
3. Stoichiometric end point.

PART – II

(PHYSICAL CHEMISTRY)

I. Essay Questions :   **Answer any ONE question**   **(1 x 20 = 20)**

1. **a)** What is adsorption? Explain the various factors influencing the adsorption.
   b) Write note on **i)** Molar heat capacity **ii)** Elevation of boiling point.
2. **a)** What are the colligative properties? Explain the methods of determination for any two.
   b) Give a note on Nernst's distribution law.

II. Write Short Notes :   **Answer any FOUR questions**   **(4 x 5 = 20)**

1. Explain about Debye – Huckle theory.
2. Discuss briefly about second law of thermodynamics.
3. Write in detail about the Bomb calorimeter used for the measurement of heat of reaction.
4. What is adsorption isotherm? Explain freundlisch adsorption isotherm.
5. Hess law of heat of summation.

III. Short Answers: **Answer any TWO questions**   **(2 x 2.5 = 5)**

1. Define exothermic and endothermic reactions.
2. Parachor and Rheochor.
3. Raoult's law.

******